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MAR 05 2001  
TECH CENTER 1600/2900 1635  
#8/Raw  
Seq listing  
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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/548,449

DATE: 03/02/2001  
TIME: 09:03:50

Input Set : A:\917501-1.txt  
Output Set: N:\CRF3\03022001\I548449.raw

4 <110> APPLICANT: Norris et al.  
6 <120> TITLE OF INVENTION: TISSUE-SPECIFIC AND PATHOGEN-SPECIFIC TOXIC AGENTS  
7 AND RIBOZYMES  
9 <130> FILE REFERENCE: 9175-016-999  
11 <140> CURRENT APPLICATION NUMBER: 09/548,449  
12 <141> CURRENT FILING DATE: 2000-04-13  
14 <150> PRIOR APPLICATION NUMBER: 09/291,904  
15 <151> PRIOR FILING DATE: 1999-04-14  
17 <160> NUMBER OF SEQ ID NOS: 14  
19 <170> SOFTWARE: FastSEQ for Windows Version 3.0  
21 <210> SEQ ID NO: 1  
22 <211> LENGTH: 66  
23 <212> TYPE: DNA  
24 <213> ORGANISM: Artificial Sequence  
26 <220> FEATURE:  
27 <223> OTHER INFORMATION: LEASHI promoter  
29 <400> SEQUENCE: 1  
30 gatcctcaga aaattatattt aaatttccaa ttgacattgt gagcggataa caatataatg 60  
31 tgtgga 66  
33 <210> SEQ ID NO: 2  
34 <211> LENGTH: 74  
35 <212> TYPE: DNA  
36 <213> ORGANISM: Artificial Sequence  
38 <220> FEATURE:  
39 <223> OTHER INFORMATION: Modified rrnb promoter  
41 <400> SEQUENCE: 2  
42 agaaagcaaa aataaatgct tgacactgta gcgggaaggc gtataatgga attgtgagcg 60  
43 gataacaatt caca 74  
45 <210> SEQ ID NO: 3  
46 <211> LENGTH: 492  
47 <212> TYPE: DNA  
48 <213> ORGANISM: Artificial Sequence  
50 <220> FEATURE:  
51 <223> OTHER INFORMATION: ANR promoter  
53 <400> SEQUENCE: 3  
54 actcgcggat catcttcacc atcggccgca actcctgcgg gatatactcg tctctctcct 60  
55 ccaccggcac ccccatggtg gcggccagct cgcgccctgc ctgggaaagc tgtacatgct 120  
56 gatcggcggc gtcggtgccg gcggccgggt cttccgcctg ctcggcggtg ccggtccgtg 180  
57 cggccttgcc gtccgcggcg gcgcgcgatg agggcggcac ctgggtggtg atccagccac 240  
58 tgagggtcaa cattccagtc actccgggaa aaatggaatt cttccattgg atcgccccac 300  
59 gcgtcgcgaa cttgagcccc cttttcgtog ccccttgaca ggtgcgaca ggtagtcgca 360  
60 gttgtttgac gcaagtcaat gattggaaac gccatcggcc tgtcagaaat ggtagttgcc 420  
61 agacctatgg ctggcaccgg catcgcggtt gcgttaccct tactcctgtt gtgcctttaa 480  
62 cctagcaagg ac 492  
64 <210> SEQ ID NO: 4  
65 <211> LENGTH: 1113  
66 <212> TYPE: DNA

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67 <213> ORGANISM: Artificial Sequence
69 <220> FEATURE:
70 <223> OTHER INFORMATION: ProC promoter
72 <400> SEQUENCE: 4
73 aattcctcga agtcccttgcg ctgcttgcg ttcattgatgt cgtagatcag cgcattgcacc 60
74 tgcttctgtt ccagcgggtg caggttgatc cggcgtagat cgcattccac ccggtatcatg 120
75 ggtggcaggc cggcgagag gtgcaggtcc gaagcgccct gtttggcact gaaggcgagc 180
76 agctcggtaa tatccatggg actccccaat tacaagcaag caggtagaat gccgccaaaag 240
77 ccgccgtctc ggacaaggaa aacaccggat gagccagggt gcttccaggc cacgcgtggt 300
78 gtctctgcgc agacgcggaa cctcgacact ggaacaggaa gatggccatc gaggcggcg 360
79 gtttcgaggc cgtcgagcgc acgcgcaggc cacttccata gggcgagggt aatgtccacg 420
80 atagcagaga atattgcaaa ggttgcgcgc cgcattccgt aggcagcgca agctgcgggg 480
81 cgcgatccgc ccacggtcgc cctgctcgc gtgagcaaga ccaagccgc cgcgcgggtg 540
82 cgcgaggcgc acgcgcgcgc ccttcgcgac ttcgcgcaaa actacctgca ggaggccctc 600
83 ggcaagcagg ccgaactggc cgacctgccc ttgaactggc acttcatcgc ccccatccag 660
84 tcgaacaaga cgcggcccat cgcgcgcat ttccagtggg tgcaactcgt ggaccggttg 720
85 aagatcgcgc agcgcctgtc ggagcaacgc cgcgcggggt tgccgccctt gaatgtctgc 780
86 ctgcaggtca acgtcagcgc cgaagccagc aagtccggtt gcgccccga ggacctgccc 840
87 gccctggcgc aggcggtgaa gcaactgccc aacctccgat tgcgtggcct gatggccatc 900
88 ccgaaccca ccgcggaacg cgcgcgcaa cagccgcgt tcgccgcct gcgcgaactg 960
89 ctgctggacc tgaaccttgg cctggacacc ctgtccatgg gcatgagcga cgacctcgag 1020
90 gcagccatcg gcgaagggtc gacctgggtc cgcattcggt ccgccctgtt cggcgccgc 1080
91 gactacggcg cgcggcttc ttgaatgaat ccc 1113
93 <210> SEQ ID NO: 5
94 <211> LENGTH: 66
95 <212> TYPE: DNA
96 <213> ORGANISM: Artificial Sequence
98 <220> FEATURE:
99 <223> OTHER INFORMATION: ARC promoter
101 <400> SEQUENCE: 5
102 ctagagctat tgatgtggat caacattgtc cactagccgc tgccgcctaa tctccagaat 60
103 tgtgag 66
105 <210> SEQ ID NO: 6
106 <211> LENGTH: 2120
107 <212> TYPE: DNA
108 <213> ORGANISM: Staphylococcus aureus
110 <400> SEQUENCE: 6
111 ttatttagca ggaataatta gccagattat cgagggagtt ccagggcaat ccaaaccattg 60
112 ttatatatgc atttataaaa ttttcaagat aatttattat tcataccctt gccctttgtt 120
113 tcaaaattat gccctttttt tgcccttgga aacaaccaca ctctaaatt aatagggtgt 180
114 gtggtttgat cttttataat ataacataaa aacaaccacc cagtaactag tatgagtggc 240
115 gtacgcacta taacaactct atgttatcaa gatatatgta tatgagtgat gacaaggaag 300
116 atgtctcctg ttgagaccaac agccagatat atggcctctt gccgggctat atagttcact 360
117 cctactatat acacatgtaa ttataacata aaaaaataga caagtaccga agtacctgcc 420
118 taaataacaa caagattaac atgtgaataa tggaaataaa aagtcagccc gaaggctaac 480
119 ttacgaatag atgaaaattt gaacacattg ctgtgtctaa aatgattata gcataaataa 540
120 cgaatatttc cagctcgaaa ttaatatatt gtaataataa tattttatat ctttggttaat 600
121 aattatttaa ttgatttaca taaataataa ttgtaaaatt aatttgtaat cgattgcaaa 660
122 taagttatag gagaaaataa aatgaataaa aaactattaa caaaaacatt gatagcaagt 720

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123 gcttttagttt taacaacagt aggttcaggt ttctattctt cttcaaatta taatgggtatt 780
124 aataacgttg aaaaagctga gcaaacgaca gataacgcat tgtggaaaaa tgtaagagac 840
125 gcttttaaaag acgcgaatat tatcgataaa acagataatg aaaatgtcaa ggttacgtat 900
126 aaaatagaaa atggtggaga aaataccata gaaggaacag ttaatttaga aaatattagt 960
127 acttcaaaca atcctaaaat aaacctcaa aatgttaca aaattaatat aactagaaaa 1020
128 aatccgaact accctaatat tgatgcta atacatgga aaaaattacc agaaaaattg 1080
129 aaagaaaaaa atatagtga acaacggcga caatgtttca atcttaagta cagaccctaa 1140
130 agatgagact gtattcggta aagtaggaga agataaatca aacgtaagca atagatacat 1200
131 caatcctaaa gatataaatg aattcaaact actaaaaata cttttttccg aggcagatta 1260
132 ctctgcctc tttctttgaa cagtgatata ttctgatcta tgtaacactc aattacttca 1320
133 gattcttttac ctttaacttc ctttaattca tttctctcta tctcctcaaa aagttgtgct 1380
134 ttttgatttg tgattggagt tgggcgtttt ttcacgcgt tgtttcaatt cctttttaag 1440
135 gtattcta atctctctag tcatatcaat tgttttttta cttctcacct ttagtgaaat 1500
136 actcttatcc tttctctct tgcgttaatg ttgctaatta gtataaaata catgcgccca 1560
137 tatattccaa tggtaggaca ttttaattctg gattttcagc tattttcata aatctattat 1620
138 ctgataattt gcttaatcca attttcaagc catagcctaa attccccatc cactaagtca 1680
139 tttgttttca tatggtttta atctacggcc aatctcaaag atagattgac cagcgatggt 1740
140 taaagtcata tttcacggat ccacatttac gataaacata tctagttaca caatattatc 1800
141 ccttactgca acacaggacg tttctcagcg taaaaaacac cactagaaag tgactttaaa 1860
142 gaatataact aattcaaact tatattaatt aatattcttt aaatgaccac tcacactttg 1920
143 ttttttgcta tttgtaactt taaaatgttg tttgaaatct atattttttt gatatagctc 1980
144 cctatgtaac aaacaatttt taattaatat atatttaaac aagtcaattt agagatcggg 2040
145 taattcgatt catttaaata atatttatat attctatatg taaacgttta cacatttgaa 2100
146 gtaaggagaa ttaaaaatga 2120

```

148 &lt;210&gt; SEQ ID NO: 7

149 &lt;211&gt; LENGTH: 177

150 &lt;212&gt; TYPE: DNA

151 &lt;213&gt; ORGANISM: Artificial Sequence

153 &lt;220&gt; FEATURE:

154 &lt;223&gt; OTHER INFORMATION: P1 pac site

156 &lt;221&gt; NAME/KEY: CDS

157 &lt;222&gt; LOCATION: (1)...(177)

159 &lt;400&gt; SEQUENCE: 7

```

160 cca cta aaa agc atg atc att gat cac tct aat gat caa cat gca ggt 48
161 Pro Leu Lys Ser Met Ile Ile Asp His Ser Asn Asp Gln His Ala Gly
162 1 5 10 15
164 gat cac att gcg gct gaa ata gcg gaa aaa caa aga gtt aat gcc gtt 96
165 Asp His Ile Ala Ala Glu Ile Ala Glu Lys Gln Arg Val Asn Ala Val
166 20 25 30
168 gtc agt gcc gca gtc gag aat gcg aag cgc caa aat aag cgc ata aat 144
169 Val Ser Ala Ala Val Glu Asn Ala Lys Arg Gln Asn Lys Arg Ile Asn
170 35 40 45
172 gat cgt tca gat gat cat gac gtg atc acc cgc 177
173 Asp Arg Ser Asp Asp His Asp Val Ile Thr Arg
174 50 55

```

177 &lt;210&gt; SEQ ID NO: 8

178 &lt;211&gt; LENGTH: 13

179 &lt;212&gt; TYPE: DNA

180 &lt;213&gt; ORGANISM: Artificial Sequence

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Input Set : A:\917501-1.txt  
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182 <220> FEATURE:  
 183 <223> OTHER INFORMATION: IHF binding site  
 185 <221> NAME/KEY: modified\_base  
 186 <222> LOCATION: all "n" positions  
 187 <223> OTHER INFORMATION: n=a, c, g, or t  
 189 <400> SEQUENCE: 8  
 OK-> 190 aatcaannan tta                      13  
 193 <210> SEQ ID NO: 9  
 194 <211> LENGTH: 45  
 195 <212> TYPE: DNA  
 196 <213> ORGANISM: Artificial Sequence  
 198 <220> FEATURE:  
 199 <223> OTHER INFORMATION: DicFl molecule  
 201 <400> SEQUENCE: 9  
 202 caggcgacag gtatagtttc tctccgattt gtgcctgtcg cctgc                      45  
 204 <210> SEQ ID NO: 10  
 205 <211> LENGTH: 172  
 206 <212> TYPE: RNA  
 207 <213> ORGANISM: Artificial Sequence  
 209 <220> FEATURE:  
 210 <223> OTHER INFORMATION: ribozyme  
 212 <221> NAME/KEY: modified\_base  
 213 <222> LOCATION: all "n" positions  
 214 <223> OTHER INFORMATION: n=a, c, g, or u  
 216 <400> SEQUENCE: 10  
 217 gcggccgcuc gagcucugau gaguccguga ggacgaaacg guacccggua ccgucagcuc                      60  
 OK-> 218 gagaucucun nnnnnncuga ugaguccgug aggacgaaan nnnnagaucg gucgacggau                      120  
 219 cuagaucugu ccugaugagu ccgugaggac gaaacggauc ugcagcggcc gc                      172  
 221 <210> SEQ ID NO: 11  
 222 <211> LENGTH: 242  
 223 <212> TYPE: RNA  
 224 <213> ORGANISM: Artificial Sequence  
 226 <220> FEATURE:  
 227 <223> OTHER INFORMATION: ribozyme  
 229 <221> NAME/KEY: modified\_base  
 230 <222> LOCATION: all "n" positions  
 231 <223> OTHER INFORMATION: n=a, c, g, or u  
 233 <400> SEQUENCE: 11  
 234 aagcuuugga acccugauga guccgugagg acgaaacgau gacauucugc ugaccagauu                      60  
 OK-> 235 cacggucagc agaaugucau cgucggaucc agauccnnnn nncugaugag uccgugagga                      120  
 OK-> 236 cgaaannnnn nnnngcaagg gucugcgcaa cgacgacgau gagguaccac aucgucgucg                      180  
 237 uugcgcacug augaggccgu gaggccgaaa ccuugacgc guuccuugc ggccgcucua                      240  
 238 ga                      242  
 240 <210> SEQ ID NO: 12  
 241 <211> LENGTH: 14  
 242 <212> TYPE: DNA  
 243 <213> ORGANISM: Artificial Sequence  
 245 <220> FEATURE:  
 246 <223> OTHER INFORMATION: consensus ribosome binding site

RAW SEQUENCE LISTING  
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Input Set : A:\917501-1.txt  
Output Set: N:\CRF3\03022001\I548449.raw

OK> 248 <221> NAME/KEY: modified\_base  
249 <222> LOCATION: (8)...(11)  
250 <223> OTHER INFORMATION: n=a, c, g, or t  
252 <400> SEQUENCE: 12  
253 ggaggtgnnn natg  
255 <210> SEQ ID NO: 13  
256 <211> LENGTH: 16  
257 <212> TYPE: DNA  
258 <213> ORGANISM: Artificial Sequence  
260 <220> FEATURE:  
261 <223> OTHER INFORMATION: promoter  
263 <400> SEQUENCE: 13  
264 gagtcgacgg atccgg  
266 <210> SEQ ID NO: 14  
267 <211> LENGTH: 17  
268 <212> TYPE: DNA  
269 <213> ORGANISM: Artificial Sequence  
271 <220> FEATURE:  
272 <223> OTHER INFORMATION: promoter  
274 <400> SEQUENCE: 14  
275 tgggggtggg ggtgggg

14

16

17

VERIFICATION SUMMARY                      DATE: 03/02/2001  
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Input Set : A:\917501-1.txt  
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L:190 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:218 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
L:235 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:236 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:253 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12